

Introduction

This document is for use by architects, building contractors, owner/operators, and any other individuals involved in the design, construction, and operation of any facility regulated by the Maricopa County Environmental Health Division. What we have provided here is a guide that includes requirements and recommendations for permitted facilities in Maricopa County. This manual is based on the Maricopa County Environmental Health Code and various trade regulations (e.g. UPC, UMC, FDA guidelines) and is not all inclusive.

It is our objective to provide you with the best information on how to construct facilities, in order to meet Health Code Requirements, as well as, provide an easily maintainable and efficient facility.

In order for us to meet our objective, Maricopa County Environmental Health Code requires all proposed facilities to submit plans for review. No establishment shall be constructed, nor shall any major alteration or addition be made thereto, until detailed plans and specifications for the premises have been submitted to and approved by the Department; nor shall any construction, alteration, or addition be made except in accordance with approved plans and specifications. A remodel is an alteration to the structure or equipment of an existing establishment and also requires plan submittal. In addition to being law, plan review also allows our Department to preview the project and make any necessary corrections to the design, before they are completed, possibly saving time and money.

In addition to our Department, other jurisdictions, such as City/County Building & Zoning, Fire Department, County Water & Waste, and State Agencies, may require plan submittal. If so, these agencies must receive plans prior to submitting to our Department.

Should it be necessary or desirable to make any material change in the approved plans and specifications, revised plans (addendum) and specifications shall be submitted to our Department for review, and approval must be obtained before the work affected by the change is undertaken.

Important points to remember:

- 1) A menu is a critical part of the plan review process. The type of food and service style will influence the type of equipment required. Plans should be based on *HACCP (Hazard Analysis Critical Control Point)* quality assurance concepts. A menu based on risk assessment will help in the layout and design of the establishment. Submit a proposed menu with your plans for approval. For further information concerning *HACCP* based menus, contact our Department *HACCP* program specialist at 602-506-6972.

2) Install the equipment to be easily accessible for cleaning.

3) Develop an efficient food flow system, from the point of delivery to final service.

If you have any questions during the planning or construction of your establishment, please contact the Maricopa County Environmental Services Plan Review Office at 602-506-6980.

For an interactive version of these guidelines, including more figures, and other plan review materials, please visit the following web site.

<http://www.maricopa.gov/envsvc/ENVHLTH/planrev.asp>

I. Plans, Inspections, Fees, Location, and Downloads

A. Plan Review

Complete a Plan Review Application and submit with:

1. One (1) complete set of plans (minimum size 8.5" x 11" or larger). Plans shall be drawn to a scale, e.g. 1/4" = 1 foot, if no scale is included, provide all pertinent dimensions.
2. Plan Review fee
3. Include one (1) plumbing site plan (including wells and septic systems), if project is not connected to public sewer and water systems.
4. Plans submitted shall include the following for approval:
 - a. Complete floor plan
 - b. Complete equipment layout and schedule. Elevations of equipment, if available
 - c. Finish schedule
 - d. Plumbing schedule, including location and size of water heaters, overhead waste water lines, floor drains and floor sinks
 - e. Manufacturer specification sheets for each piece of equipment shown on the plan
 - f. Lighting plan, including all areas that are to be shielded

- g. Complete exhaust ventilation plan (HVAC), including restroom ventilation
- h. All existing equipment & finishes must be defined
- i. Site plan showing the location of the business on site including the alley, streets and location of any outside equipment (dumpsters, grease bins, etc., including restrooms, if applicable)
- j. Written legal agreement for shared restrooms not located within the establishment.
- k. Proposed Menu (Including seasonal, off-site, banquet menus):
Service Style, Type of Food

AN INCOMPLETE PLAN SUBMITTAL WILL BE REJECTED!

B. Inspections

During construction, the Maricopa County Environmental Services Department will make inspections of the establishment's construction and equipment installation. A Pre-final (prior to pre-finish installation and approx. 75% complete) and final inspection are required. You may schedule these inspections and additional courtesy inspections by contacting the Plan Review Office. A final inspection will be necessary to determine if the establishment complies with the Maricopa County Environmental Health Code. Upon completion of the construction, including all finish work, you must contact the assigned inspector to arrange for a **final inspection**. The establishment shall have passed all other regulatory inspections and have obtained a certificate of occupancy (C of O) prior to a final inspection by this Department. All water, plumbing, electrical, gas, vent hoods, coolers, walk-ins, and other equipment etc., shall be operational at time of the final inspection. The establishment will not be issued a Health permit until it passes a final inspection. In no case should a final inspection be requested less than (2) working days prior to the proposed opening of the establishment. *Note:* Inspections will be conducted during normal business hours Monday to Friday, between the hours of 7am and 5pm.

C. Fees (Plan Review Fee Only; Operating Fee Separate)

<u>Plan Type</u>	<u>Amount</u>
Restaurant 0-9 seating	\$250.00
Restaurant 10+ seating	\$350.00
All other food establishments*	\$350.00
Public accommodations	\$300.00
Pet shop and groomers	\$175.00
School grounds - No kitchen	\$250.00
Remodel fee-approved only by inspector	
EXPEDITE FEE 2x fee amount	

* Includes retail grocery, meat, bakery, food processor, school cafeteria, food jobber (food storage facility), caterer.

After plans are submitted to the Department a three to four week plan review takes place. If the establishment failed to submit plans and wants to open and operate before the standard plan review process is complete, an expedited plan review process may be requested at a cost of twice the standard fee.

D. Location

Plan Review Office: 1001 N. Central #125, Phoenix, AZ 85004
Phone Number: 602-506-6980

Central Region: 1001 N. Central #575, Phoenix, AZ 85004
Phone Number: 602-506-6965

Eastern Region: 1255 W. Baseline Rd. #124, Mesa, AZ 85210
Phone Number: 480-820-7655

Northern Region: 3101 E. Shea #201, Phoenix, AZ 85028
Phone Number: 602-867-1780

Western Region: 8910 N. 43rd Ave. #101, Glendale, AZ 85302
Phone Number: 623-939-5788

E. Downloads: www.maricopa.gov/envsvc/Envhlth.asp

Establishment Construction Guide
Maricopa County Health Code
1999 FDA Food Code
Manager Certification Code
Food Handler Schedule

Plan Review Application
Plan Review Permit Fees
Food Handler Book (English)
Food Handler Book (Spanish)

For additional information regarding mobile food, mobile commissary, vending machine, chemical toilet, pet groomer, and water transport codes, guides and agreements, refer to section XV.

II. Equipment

A. Materials and Design

All food service equipment shall be commercial grade and meet the standards of design and construction in accordance with Department standards or the National Sanitation Foundation (NSF). Only equipment which is designed and constructed in accordance with the applicable standard may be installed as new or replacement equipment (Maricopa County Environmental Health Code, Chapter 8, Sec. 2, Reg. 2). The NSF seal is generally a good indicator the equipment is approved.

B. Specialty Equipment

Cold Plates: When installed in ice bins, the cold plates must be an integral part of the bin. Drop-in cold plates are not allowed.

Dipper Wells: Provide dipper wells with running water where you dispense bulk ice cream. Also, consider using dipper wells with dispensing utensils for other bulk foods such as cooked rice, whipped butter, etc.

Food preparation sink: Install separate sinks designed for vegetable washing or food preparation only in the food preparation area.

Single Service Dispensing Equipment: Install equipment for properly handling single service items like paper cups, lids, and straws.

Food Contact Surfaces: Install work surfaces made of stainless steel. NSF approved cutting surfaces are acceptable in food preparation areas.

Buffets:

Open Food Display: Protect food on display from consumer contamination by using easily cleanable sneeze guards, display cases and similar equipment. Design and install these devices to intercept a direct line between a customer's mouth and foods on display. The average mouth/nose height ranges between 46" and 50" above the floor. Properly installed sneeze guards must protect food from the entire mouth/nose range.

Temperature Control: Equipment must maintain all perishable foods at required temperatures. Provide thermometers in all hot and cold food holding units.

Drive-Through and Walk-Up Windows: Both types of windows shall be self-closing. Exterior pass-through food drawers, with removable pans,

shall have seamless coved corners, smooth counters, and open-ended slide channels for easy cleanability.

C. Equipment Installation Directions

Table-Mounted Equipment: Install table-mounted equipment on 4-inch legs, or seal the equipment to the table using silicone caulk, unless it is easily movable. Easily movable equipment must: a) be less than 30 lbs. (14 kg.) or on casters, gliders, or rollers; b) have no utility connection or have a quick disconnect utility connection. Maintain pieces of table-mounted equipment at least 6 inches apart to facilitate cleaning access.

Floor-Mounted Equipment: The preferred method of installation is to place equipment on casters, gliders, or rollers. Use coated steel, commercial grade, NSF Approved, utility connections that are smooth and flexible with quick disconnects. The connections must be long enough to move the equipment so the area around and behind can be cleaned.

Equipment may be elevated on legs, as long as a minimum 6-inch clearance between the floor and equipment is provided. Floor mixers may be elevated to provide at least a four-inch clearance between the floor and equipment.

Install stationary equipment with sufficient space between adjacent equipment, floors, walls, cabinets and ceilings to facilitate proper cleaning. Maintain 8 inches of spacing when the area to be cleaned is less than 4 feet long and 18 inches when the area is greater than 4 feet.

If sufficient space is not possible between, behind, and above each piece of fixed equipment, or if the spaces between such equipment is greater than 1/32 inch, the spaces must be sealed. Use 100 percent silicone caulk or cleanable trim/flashing to seal spaces. Seal all gaps, cracks, voids, protrusions, and penetrations using silicone caulk or trim that meets the finish material standard. The silicone bead must be smooth and coved.

Conceal all plumbing, electrical, and gas lines in walls or ceilings, whenever possible. Otherwise keep all exposed lines at least 6 inches above floor level and at least 1/2 inch away from walls and ceilings. Conduits or pipes shall not be installed across any aisle or high traffic areas.

Walk-in coolers: Walk-in refrigerators, freezers, or other large equipment, with spaces 30 inches or less between the top surfaces of the equipment and the ceiling require flashing or closing off in a clean, tight, and vermin

proof manner. Flash, trim, or caulk spaces between walk-in refrigerators and adjacent walls.

III. Refrigeration

A. General Storage

Refrigerators and freezers are required to maintain potentially hazardous foods at or below 41°F and 0°F respectively. It is recommended that refrigerators be maintained between 36°F and 38°F. These units must be commercial grade and meet NSF standards. **Domestic-style refrigerators and freezers are not approved for food storage.**

Refrigeration and freezer storage involves six major areas:

1. Storage for short-term holding of perishable and potentially hazardous food items.
2. Long-term storage.
3. Storage space for quick chilling of foods.
4. Space for assembling and processing of potentially hazardous foods.
5. Display storage.
6. Display storage for customer service.

Calculating the amount of refrigeration and freezer space should be based on the menu and expected food volume. The amount and location of refrigeration and freezer equipment should complement the food flow of the operation from receiving, storage and food processing, to the point of service.

When assessing the refrigeration needs, shelving space within the refrigeration and freezer units should be designed to prevent the cross-contamination of foods. Separate raw meats and poultry from ready-to-eat foods such as produce and pre-prepared food items. Thermometers must be conspicuously located in all units. Thermometer sensing elements should be located near the door(s). Reach-in and walk-in refrigerators and freezers shall be located within an enclosed establishment. Any refrigerator or freezer unit located outside an establishment shall contain only pre-packaged food items. The installation of outdoor refrigerators or freezers is discouraged due to dusty conditions and hot climate.

B. Walk-in Coolers

Walk-in coolers should be installed when there is a need for long-term storage of perishable and potentially hazardous foods or when cooling space is needed for prepared and cooked foods. These coolers should be located near delivery or receiving areas. Outdoor walk-in refrigerators or freezers are discouraged.

C. Reach-in Refrigerators

These units are for short-term storage of perishable and potentially hazardous foods. These units should be considered to meet the daily demands of the kitchen operation. They are to be conveniently located at points of food preparation and food assembly. These units are not to be considered for the quick chilling of cooked and prepared foods.

D. Freezers

Freezers are for long-term storage. They are not designed to be used as quick-chill units. These units should be located near delivery and dry storage areas.

E. Blast Chillers

These units should be considered when handling large volumes of food that require quick chilling. A blast chiller is an efficient cooling mechanism for any amount of food to be chilled, and where refrigeration storage space is limited.

F. Refrigerated Worktables

These units are needed when the menu includes assembling potentially hazardous foods. These units provide easy access of foods from the top of the unit. These units are not designed for long-term storage of food or cooling.

G. Refrigerated Processing Rooms

These areas should be considered when there is extensive handling of cold potentially hazardous foods.

H. Display Storage Refrigerators

These units are designed to display potentially hazardous foods under refrigeration. Examples of these units are deli display, fresh fish, and meat and poultry cases.

I. Customer Service Display Units

These units are designed for holding foods under refrigeration for customer

access. They are designed for short-term display and are not designed for cooling of foods. Beverage display coolers are not approved for storing potentially hazardous foods.

J. Cold Buffet Units

Cold buffets and salad bars are designed for short-term display. They should be mechanically refrigerated.

K. Ice Machines

If ice is to be used as a cooling medium, the unit should be adequately designed and sized to meet all operational needs.

IV. Storage

A. Dry Storage

Adequate and suitable floor space shall be provided for the storage of food and beverages. In addition to working storage (i.e., wall-mounted shelves and cabinets over food preparation equipment or under counter storage shelves) additional dry-storage space shall be provided.

Storage space should consist of 25% of the food preparation area, or one square foot per seat, whichever is greater, but not less than a total of 100 square feet of floor space.

At least 32 linear feet of shelving units, a minimum of 18 inches deep, should be installed in the minimum 100 square feet of floor space provided. All shelving must be at least 6 inches above the floor with a clear unobstructed area below or an upper shelf surface above a completely sealed minimum four-inch base.

B. Wet Storage

Storage of packaged food in contact with water or undrained ice is prohibited. Wrapped sandwiches and wrapped food items shall not be stored in direct contact with ice. All equipment and containers used for the storage of packaged food items in contact with ice shall be designed to allow gravity drainage only of melted ice to a floor sink with an approved air gap.

For guidelines on approved methods of live seafood storage, please visit our website at www.maricopa.gov/envsvc/ENVHLTH/planrev.asp.

C. Storage Locations

Cooking utensils: Designate areas for clean cooking utensils, cutting boards, glassware and dishware. Store them at least 6 inches off the floor in a clean, dry location where they will be protected from dust and splash.

Clean Linen: An area, separate from soiled linens, should be provided, to store and protect clean linen from contamination.

Soiled Linens: Specify the location of covered, non-absorbent containers or washable laundry bags designated for holding damp or soiled linens, soiled uniforms, aprons, etc.

Chemicals: Designate an area for toxic materials storage that is away from food and clean utensils. These include detergents, sanitizers, related cleaning or drying agents and caustics, acids, polishes and other chemicals. Install cabinets, cages, or physically separate shelves for storing chemicals.

Pesticides are **NOT** permitted in the establishment. Pest control shall be provided by a properly licensed pest control applicator.

Maintenance Equipment. Designate an area, away from food or dishware, for storing maintenance equipment and cleaning supplies. Supply adequate broom racks to keep brooms, dust pans, etc., off the floor. Install heavy-duty mop hooks that can support wet mops over the janitorial sink so that wet mops may drip dry into the sink basin. Provide open wire or solid metal shelving at each janitorial station for a working supply of cleaning items. The use of peg-board is not approved.

Firewood: If firewood is used, designate an area for firewood separate from food service and storage areas. Provide special measures to ensure insect and rodent control.

D. Shelving

Kitchen shelving must meet NSF standards. Shelves should be constructed of metal or material which has been finished to provide smooth, easily cleanable, non-absorbent surfaces. Shelves subject to heat or moisture must be of rust-resistant metal or plastic. Shelving not approved by NSF may be used for dry storage, provided the particular area used: is a separate room isolated from other food service operations; stores items not consisting of open foods; and has all raw wood sanded smooth, free of open joints and sealed or painted to a smooth non-absorbent finish. Final on site approval is required.

All refrigerator and freezer shelving must meet NSF standards. In addition, shelving installed in refrigerators must be made of rust-resistant metal or other impervious material. The minimum height of a bottom shelf above the floor of a walk-in refrigerator or freezer is 6 inches.

V. Employee Areas, Restrooms, and Hand Wash Sinks

A. Employee Areas

A coat rack, coat hooks or other suitable facilities for employees to store their clothing and other personal belongings should be provided. Consider installing lockers in a designated area away from food production and storage locations.

If employees change clothes on-site, provide a dressing room where they may change and store their personal, non-working garments. This cannot be in areas used for storing, preparing or serving food, or for washing or storing utensils.

Designate a separate break room or area away from food preparation and utensil washing areas, if employees are not allowed to eat in the dining room.

Personal medications and first aid kits shall not be stored in food storage, preparation or service areas.

B. Restrooms

Number: A minimum of one employee restroom is required. Men's and women's public restrooms are required, and must include at least one urinal (in the men's), for facilities that allow the onsite consumption of

alcohol. Fixture counts are based on seating capacity and must meet 1997 Uniform Plumbing Code, Table 4-1 requirements.

Americans with Disabilities Act of 1990 (ADA): This Department does not have enforcement authority or jurisdiction over ADA regulations. Contact the local building department.

Location: Restrooms must be conveniently located within 200 feet of all food related areas and be accessible to employees. Provide a written legal agreement, if restrooms are shared with other facilities.

Access: Public access to restrooms through food preparation or utensil washing areas is prohibited.

Fly-Control: Provide completely enclosed toilet rooms with tight-fitting, self-closing doors.

Ventilation: Mechanically vent restrooms to the outside of the building.

Dispensers: Each hand wash sink must have a supply of dispensed, hand cleansing soap. Also, provide disposable paper towels. Dispensers must be conveniently located near each hand wash sink. Hand wash sinks for public use may have hot air hand drying devices. If employees share restrooms, provide dispensed, disposable paper towels. Restrooms specifically for employees are to be provided with dispensed disposable paper towels only.

Water Supply: Provide each hand wash sink with hot and cold water by means of a mixing valve or combination faucet. Any self-closing, slow closing, or meter-faucet used must provide a flow of water for at least 15 seconds without the need to reactivate the faucet.

Refuse Containers: Provide containers for the disposal of paper towels.

Sanitary Containers: Provide covered sanitary containers for the disposal of feminine hygiene products.

Diaper Changing Stations: If diaper-changing tables are provided, you must provide covered waste containers. We recommend the container have tight-fitting lids.

C. Hand Wash Sinks

Location: Provide a sufficient number of hand wash sinks. Hand sinks shall be easily accessible and located within 25 feet of all work stations, food preparation, and ware washing areas. Porcelain hand sinks are approved for use. In bars, where ice is handled or manual washing, rinsing, and sanitizing of glassware is done, a separate hand washing sink is required.

Water supply: Provide each hand wash sink with hot and cold water under pressure by means of a mixing valve, combination faucet, or tempered water at the faucet. Tempered water is 85°F or higher.

Dispensers: Provide a supply of dispensed, hand cleansing soap and a supply of dispensed, disposable paper towels at each kitchen and bar hand wash sink. A waste receptacle should be located near the sink. The use of common towels is not allowed. Hand drying devices using air are not allowed in food preparation, service, or bar areas. Hand sanitizers or gloves may be used **in addition** to conventional hand washing, but never as a substitute. Sanitizers and gloves should be dispensed at your hand wash sinks.

Splash protection: Splash guards are needed when a hand wash sink is within 18 inches of a food contact surface, food/utensil storage shelves, food service areas, vegetable preparation sink or dish washing sink. Install a waterproof splashguard at least as high as the faucet and as wide as the hand sink, between the sink and food/dish related areas. We recommend the use of stainless steel. Securely fasten splashguards to the wall, counter top, or sink. Seal the seam created by the splashguard with silicone.

VI. Plumbing

Install and maintain plumbing according to the 1997 Uniform Plumbing Code and local requirements. If a well or septic system is used, plans must be submitted to our Department (Water & Waste Management Division) for approval.

A. Water Supply

Provide an adequate supply of potable water to satisfy the needs of the food service establishment. Water must be from an approved public water supply source or from a source approved by the Maricopa County Environmental Services Water & Waste Management Division or the Arizona Department of Environmental Quality.

B. Sewage Disposal

All sewage must go to an approved sewage system.

C. Grease Interceptors

Local municipality or County Plumbing Code requirements determine the number and size of grease traps, grease interceptors or catch basins. If required, refer to the local municipality for the installation requirements. If the establishment is located outside a municipality on county land, contact the County Planning and Development Department for current code requirements.

D. Janitorial Stations and Mop Sinks

Design: Provide janitorial stations for general clean up activities in all permitted establishments. Include either a floor basin or a leg-mounted mop sink. A concrete or ceramic tile curbed basin may be used. The minimum size of the basin must be 3 feet square and the curbing at least 4 inches high and 4 inches wide. Connect the basin or sink, with a drain, to the sanitary sewer. Provide hot and cold water, under pressure, with a mixing faucet and approved back flow protection.

Location: Janitorial stations should be conveniently placed for maintenance of the establishment. They should be separate from food and beverage preparation and storage areas. The janitorial station must be accessible for use during operation.

Additional Equipment: Other stationary equipment, such as water softeners or water filter systems, may not obstruct the mop basin or sink. Allow for space adjacent to the mop basin/sink for storage of mop buckets. Place chemical dispensing systems so they do not interfere with maintenance equipment storage or use. Install a separate water line for chemical cleaning systems and include appropriate back flow protection. If you suspend a water heater over the mop basin, maintain a minimum clearance of 80 inches to provide adequate space for the storage of wet mops.

E. Overhead Sewer Lines

Location: Waste lines and roof drains should not be directly above food preparation, food display, food storage and utensil washing areas.

Shielding: If you have sewer lines over any of these areas, provide seamless gutters under the pipes that will divert leakage away from the food or utensil zone. Gutters may have an open end at the wall.

F. Potable Water Backflow Protection

Inlets: All water inlets (faucets, etc.) must have an air gap between the water inlet and the fixture it is serving. The air gap must be at least twice the diameter of the water inlet or faucet. Any water inlet, faucet, etc., that does not meet this requirement is a submerged inlet. A water faucet that can have a hose attached to it is a submerged inlet.

Vacuum Breakers: Provide vacuum breakers on submerged inlets such as toilets, urinals, dish washing machine, garbage grinders and any threaded water outlets. Atmospheric vacuum breakers must be installed at least 6 inches above the highest outlet and cannot have a valve installed down line.

Special Conditions: Provide double check valves with atmospheric vents, pressure vacuum breakers, or reduced pressure backflow preventers capable of being submerged on water inlets where you cannot install an atmospheric vacuum breaker after the last shut-off valve or solenoid switch (i.e., pressure spray hoses).

Carbonators: A reduced pressure backflow preventer, or other testable, constant pressure, backflow device, should be installed between the water supply line and the carbonator. Conduit between the backflow preventer and the carbonator should be flexline, not copper. These units should also meet all other Plumbing Code requirements.

G. Indirect Waste Connections

Provide indirect wastes, with an air gap, for dish washing machines, soda fountain sinks, prep sinks, potato peelers, ice machines, steam tables, steam cookers, ice bins, salad bars, dipper wells, walk-in refrigerator or freezer condensate drainlines, and other similar fixtures.

A 1-inch minimum air gap is required, and the drainline must not exceed 15 feet from the fixture.

Indirectly connected fixtures must discharge to receptors (floor sinks, etc.) that have a vented trap placed as close as possible to the fixture and in the same room. To avoid cross connections, each fixture will require a separate line. Install receptors in accessible and ventilated areas. Design and size receptors to prevent overflows and splashing.

Food service equipment, sinks or buckets cannot receive the discharge of an indirect waste pipe.

H. Floor Drains

Number: A sufficient number of floor drains should be located throughout the establishment to facilitate cleaning. Floor drains are required in school restrooms, locker rooms, and shower areas.

Location: Floor drains are to be located in areas that require frequent water flushing to clean the floor or equipment. Floor drains must not be installed in walk-in refrigeration units except under the following condition:

Trough-type floor drains may be located in refrigerated processing rooms or high moisture storage areas, such as produce coolers or meat/poultry coolers, provided that the doors to the area or room have been undercut or are swing doors.

I. Water Softeners

Due to the presence of hard water in Maricopa County it is recommended that a quality water softener be installed to reduce problems usually associated with hard water such as lime scale, mineral buildup, etc. The water softeners will help in maintaining clean faucets, fixtures, drain lines, dishwashers, ice machines, and other similar equipment.

VII. Sanitizing Equipment

A. Hot Water System

Minimum Size: A minimum 30-gallon capacity water heater, with a 100% recovery rate, is required, and must meet the hot water demands of all the facilities' fixtures. Heat-on-demand units approved by this Department are acceptable.

Recovery rate of the hot water unit is more important than actual capacity. In the absence of specific hot water usage figures for equipment, the following table may be used to provide an approximation. **See Table 1.**

Table 1: Approximate Fixture Hot Water Usage

<u>Equipment Type</u>	<u>Gallons Per</u>	
	<u>Hour</u>	
	<u>High*</u>	<u>Low*</u>
Vegetable Prep Sink	15	15
Three Compartment Sink	60	45
Pre-Rinse Spray Hose Sink	30	30
Commercial Dishwash Machine	Varies with	
	Unit	
Bar Three Compartment Sink	20	
Chemical Sanitizing Glass Washer	60	
Hand Sink – Kitchen & Restroom	5	5
Bain Marie	10	10
Mop Sink	10	10
Garbage Can Wash Station	30	30
Clothes Washer	45	45
Employee Shower	20	20

*High – to be used when multi-use eating utensils are used.

*Low – to be used when single service eating utensils are used.

Dish Washing Machine Demand: Facilities using a commercial dish washing machine must provide hot water (temperature and volume) to meet the maximum demand for the make and model of machine to be installed. A booster heater is required.

B. Manual Dish Washing

Design: Provide a three-compartment, stainless steel sink with two integral drain boards where pots, pans or multi-use eating and drinking utensils are washed by hand. Install this sink to minimize cross-contamination to, or from your mop sink, hand sink, or food/ utensil related areas.

Size: Each compartment must be large enough to submerge the largest item to be washed. Each drain board must be equal to the area of the largest compartment. An approved drying rack or roller cart may be substituted for one drain board only.

C. Mechanical Dish Washing

General Requirements

All spray-type dish washing machines must comply with current NSF standards.

A dish table of adequate size is needed to handle soiled utensils before washing. The soiled dish table must not drain into the washing compartment of the dish washing machine. Install a table scupper across the entire flat section of the table to prevent soiled water and debris from draining into the wash tank. Install a pre-rinse sink as needed, so those larger food particles can be rinsed off before entering the dish washing machine.

A dish table, or drain board must be provided for clean dishware to drain and air dry. This installation must provide room for the temporary storage of utensils and racks immediately after being removed from dish machines. It must be at least the size of the soiled dish table.

Easily readable, numerically scaled indicating thermometers are needed. They must be accurate to $\pm 3^{\circ}\text{F}$ and show the water temperature in each tank of the machine, including the temperature of the final rinse water as it enters the manifold.

Mechanical exhaust ventilation is needed above high temperature sanitizing machines, to remove steam and vapors effectively. Type II hoods are recommended over all dish washing machines.

The installation of integral manual and mechanical dish washing drain boards will not be accepted due to cross-contamination concerns.

Additional drain boards or dish tables for air drying utensils after being washed in a low-temperature machine will be needed.

Chemical Sanitizing Machines

A sanitizer alert system is recommended, which includes a visual and audible alarm, designed and approved for the specific machine installed, to warn the user automatically when the sanitizer supply has depleted.

Hot Water Sanitizing Machines:

A booster heater is needed to supply at least 180°F water for the final rinse. The temperature rinse demand of the machine will determine the heater capacity.

A temperature gauge is required on the service line just before the booster heater.

Installation of the water heater and the booster heater should be as close as possible to the dish wash machine to avoid heat loss in the lines.

The water system should deliver hot water to the final rinse when the rinse valve opens. Machines designed for intermittent operation will require special equipment. When the length of the line from the booster to this type of machine exceeds 50 feet, the system should have a re-circulating pump.

A pressure regulator is needed on the final rinse line. The flow pressure needs to be 15 to 25 pounds per square inch.

VIII. Lighting

A. Food Service Areas

Food preparation and utensil washing areas must be well lit. The light intensity shall be at least 20 foot candles (220 lux), measured 30 inches above the floor. Also, surfaces where food is provided for consumer self-service, such as buffets and salad bars, and where fresh produce or packaged foods are sold or offered for consumption, shall have a light intensity of 20 foot candles. Inside equipment such as reach-in and under counter refrigerators shall also have a light intensity of 20 foot candles.

It is recommended that the light intensity be at least 50 foot candles (540 lux) at a surface where a food employee is working with food or working with utensils or equipment such as knives, grinders, or saws where employee safety is a factor.

B. Walk-in Refrigerators and Freezers

The light intensity shall be at least 10 foot candles (110 lux) measured 30 inches above the floor. It is recommended that fluorescent lights with cold-tolerant ballasts and vapor-proof fixtures be installed. Install lights so that lighting will not be obstructed by food stored on shelves.

C. Storage and Restrooms

The light intensity shall be at least 10 foot candles (110 lux) measured 30 inches above the floor in storage rooms and 20 foot candles (220 lux) in the restrooms.

D. Bars

Adequate shielded lighting must be provided above bar sinks, jockey boxes, ice bins, and glass chillers. Dimmer switches, on general lighting, are acceptable as a suitable alternative for use in bar areas. Provide additional lighting for clean-up purposes.

E. Protective Light Shielding

Provide shielded light fixtures above all food preparation, service, display, food storage and utensil washing areas. This includes all refrigerators, food display cases, bar equipment, coffee, soda and condiment stations, and under vent hoods. Protective tubes/lenses, plastic sleeves with end caps, or coated shatterproof bulbs may be used. Protect heat lamps against breakage with a shield surrounding and extending beyond the bulb, leaving only the face of the bulb exposed.

IX. Laundry

A. Location

Laundry facilities in a food service establishment shall be restricted to the washing and drying of linens, clothes, uniforms and aprons necessary to the operation. A separate room or enclosure shall be provided for laundry facilities. Install a door to separate food service operations from any laundry area. Such operations may be conducted in storage rooms containing packaged foods or packaged single-service articles. We recommend that you provide a vented door grill to exhaust heat from the room.

B. Clothes Dryer

If linens are laundered on the premises, an electric or gas dryer shall be provided. Dryers must be vented to the outside.

C. Linen and Clothes Storage

Clean clothes and linens shall be stored in a clean place and protected from contamination until used. Soiled clothes and linens shall be stored in non-absorbent containers or washable laundry bags until removed for laundering.

X. Finishes

A. Walls

Provide a smooth, nonabsorbent, easily cleanable surface, that is light in color. Skip trowel finish is not acceptable. Raw wood or unfinished studded walls are not permitted. We do not recommend textured wall surfaces. Walls shall be constructed with material that leaves a smooth finish such as stainless steel, approved FRP, ceramic tile, painted dry wall, etc. All splash areas must be finished with durable and waterproof material such as FRP or stainless steel. Painted dry wall in splash and moisture related areas are not acceptable. Painted wall surfaces in all food service and ware washing areas shall be smooth and light in color. A maximum 25% random pattern or band of darker colored wall finishes are only permitted in customer related areas such as bars and restrooms.

Wainscoting in all establishments must meet the same requirements as kitchen areas. Grout shall be smooth and finished flush with the surface of all tile.

Wall finishes behind cook lines and under vent hoods shall be of stainless steel or its equivalent. Wall surfaces from lower edge of kitchen exhaust hoods to the floor surface including the wall/ floor junctures shall be finishes with coved metal, coved ceramic tile, or other similar durable, easily cleanable materials.

Construction masonry units (CMU) installed as a finish material shall be free of pits, voids, cracks, depressions, and shall be smooth and easily cleanable. Light colored astra-glaze-sw® glazed masonry units are acceptable.

FRP (Fiberglass Reinforced Panels) must be light in color and easily cleanable (Pebble surface or Smooth surface). Grooved and/or painted FRP panels are not approved.

Finish faced medium density fiberboard (MDF) backed panels are acceptable in non-moisture related areas only. However, the material is not recommended due to long-term durability concerns.

Apply a clean, smooth, raised bead of silicone caulk on all gaps or seams between immovable equipment and walls. Seal all gaps, seams, and cracks. Seal spaces around pipes or conduit at all wall penetrations.

B. Floors

Floor finishes shall be commercial grade, durable, smooth, non-slip, nonabsorbent, grease-resistant, and easily cleanable. The use of poured monolithic floors may require specific approval for kitchen applications. Non-standard floor finishes will require sample submittal for approval prior to construction and installation.

Concrete floors shall be finished smooth, sealed, and have all expansion joints, saw cuts, and cracks properly filled.

Grout shall be smooth and finished flush with the surface of all tile.

C. Ceilings

Provide smooth, non-absorbent, easily cleanable, and light-colored ceiling surfaces that can withstand frequent cleaning. Exposed joists, studs or other support structures will not be accepted.

D. Coving

Provide a smooth, coved base (3/8 inch radius or greater) at the juncture of walls and floors. Coved bases are required at the juncture of cabinets and floors. Examples of acceptable materials for coved base are 4-inch vinyl or rubber, ceramic or quarry tile, and stainless steel.

Ceramic tile used as coving shall not be installed on top of floor tiles at floor/wall junctures. The floor/wall juncture shall be a true flush cove base with at least a 3/8-inch radius or greater.

Concrete curbs in walk-in cooler shall be finished smoothly, properly coved, beveled away from the wall at the top edge and thoroughly sealed.

E. Shelving, Woodwork, and Millwork

All wood shelving or woodwork shall be sanded smooth, free of open joints and sealed or painted to a smooth, final finish. All wood edges shall be smooth and easily cleanable. No raw wood is permitted. All raw wood must be sealed or painted.

F. Walk-in Refrigerator and Freezer Units

Walk-in refrigerator and freezer walls, ceilings, and floor/ wall junctures shall be metal or equal and properly coved. Flash, trim, or caulk spaces between walk-in refrigerators and adjacent walls. Walk-in refrigerators and freezers with spaces 30 inches or less in height between the top surfaces and the ceiling may require flashing or closing off in a clean, tight vermin proof manner.

We recommend the installation of screeds so that you have an effective 3/8-inch radius cove on both the interior and exterior of the unit. Other approved methods include a grout radius as an integral part of the flooring material or corrosion-resistant metals.

Because of separation problems, vinyl cove base is not acceptable in walk-in units. Due to breakage and separation concerns, we do not recommend the installation of ceramic or quarry tile as coving in walk-in units. Galvanized metal will rust when installed as a finish in a walk-in cooler. It is not recommended. Stainless steel is the preferred material.

G. Bar, Server, and Wait Stations

Bars, server & wait stations, or areas extending from the kitchen must utilize the same finishes as the kitchen. Also, the interior walls of radius counter surfaces (e.g. radius bar counters) should be constructed flat to allow equipment to be sealed to the walls.

H. Dining Room

Generally dining room finishes are not regulated. However, we recommend that if carpeting is used as a floor covering, it should be of durable, closely woven, stain resistant material, properly installed, cleaned and maintained in good repair.

I. Beverage Stations, Salad Bars, and Buffets

Floors: The floor finishes must be of durable, waterproof, grease-resistant, cleanable materials extending sufficiently from the serving side(s) of the beverage stations, salad bars, and buffets.

Coving: A 3/8-inch base coving must be provided at the juncture of the floor and wall or cabinet base.

Walls: The walls in these areas shall be light in color, smooth, non-absorbent, and easily cleanable. Skip trowel finishes are not acceptable.

Ceilings: The same finish as the dining room may be used in these areas, except that splash and moisture related areas require the installation of smooth, non-absorbent, and easily cleanable materials.

J. Multiple Use Areas

Multiple use areas must meet the more stringent requirements imposed on that area. Clearly define the finishes in these areas for final approval by an inspector.

K. Outdoor Areas

The outdoor walking and driving areas shall be surfaced with concrete, asphalt, or gravel or other materials that have been effectively treated to minimize dust, facilitate maintenance, and prevent muddy conditions.

L. Summary of Finishes and Additional Recommendations

Floors: Quarry or ceramic tile, poured epoxy, and sealed concrete is preferred flooring because of their durability. Vinyl composite tile (VCT) is not recommended due to deterioration over time. The use of diamond-plate steel or corrosion-resistant aluminum as flooring under beer kegs, or where durability is essential, should be considered.

Walls: Stainless steel, FRP, and ceramic tile meet the standard for durability and being waterproof in splash areas. Oil-based epoxy paints are appropriate in food preparation areas. High-gloss enamel paints work well in most other areas. We recommend stainless steel corner guards in high-traffic areas. Skip trowel finishes are not acceptable.

Ceilings: Install smooth, washable tiles, such as, vinyl faced tiles in suspended ceilings. Drywall painted with a high-gloss, washable finish is acceptable.

No perforated, fissured, or other textured surfaces are allowed.

XI. Insect and Rodent Control

All openings to the outside shall be effectively protected against the entrance of insects and rodents. This includes customer serve-out areas located in stadiums, ballparks, and toilet rooms located within 200 feet of a food service establishment, etc. This does not apply if a food establishment opens into a larger completely enclosed structure such as a coliseum, arena, warehouse, shopping mall, superstores, airport, or office building, where the outer openings from the larger structure are protected against the entry of insects and rodents. Toilet rooms are not exempt from this regulation. No other exceptions shall be allowed.

A. Building

All masonry or cement foundations must be rodent proof. Seal all openings into the foundation and exterior walls, including openings around wall and ceiling penetrations.

Cover all building vents with a minimum #16 mesh wire screen.

Effectively seal all air ducts, skylight, transoms and other openings to the outside.

B. Fly Protection Methods

Self-closing: Install serve-out windows with a self-closure device, such as a spring-loaded mechanism, bump pad, electronic opener, or gravity fed system.

Air Curtain: Install an air curtain so that a layer of fast moving air is produced vertically downward and directed to blow outward. The flow of air must run parallel and within 1 inch, inside or outside, across the entire width of the opening. Minimum air velocity is 750 per minute measured at 3 feet above the floor. All air curtains shall be controlled by door-activated micro-switches. No manual switches are allowed.

C. Delivery, Customer, and Restroom Doors

Pest Control: All delivery doors must be self-closing and tight fitting. Provide air curtains properly installed over exterior doors located within 20 feet of garbage areas or grease containers.

Garage Doors, Roller Doors, and Loading Docks: Garage and roller type delivery doors must be protected against pests. They shall have an overhead air curtain installed with a minimum velocity of 750 feet of air per minute measured 3 feet above the floor. Loading docks shall have properly installed tight fitting dock seals at all loading bays.

Entrance doors: Make all outside customer doors self-closing and tight fitting. Install a door sweep to prevent the entrance of insects and rodents.

Restroom doors: All toilet rooms located in or adjacent to food related areas shall be provided with tight fitting, self-closing doors or air curtains approved by an inspector. Toilet rooms on school grounds located outside the cafeteria structure are exempt.

D. Windows

Windows that open to the outside must be properly protected with #16 mesh wire screen, except drive-up windows and serve-out windows.

Protect serve-out windows against fly entrance by an approved self-closing window, a self-closing #16 mesh wire screen, or an air curtain over the window directed to blow outward. Old-style mounted fly fans are not allowed.

A roller door installed at a service window shall be provided with an air curtain.

E. Lighting

It is recommended that outside lighting around loading areas and entrances be sodium vapor rather than mercury vapor to decrease insect attraction.

F. Insect Control Devices, Design and Installation

Insect control devices that are used to electrocute or stun flying insects shall be designed to retain the insect within the device.

Insect control devices should not be located above food preparation areas. Units should be installed so as to prevent the contamination of exposed food, clean equipment, utensils, and linens, from insect fragments.

XII. Garbage and Refuse

A. Garbage Containers

Number: Each establishment is to secure their own garbage. Remember to provide sufficient garbage containers, sized to hold any garbage or refuse in a nuisance-free manner, until it is picked up.

Trash Compactors: The cleaning and proper disposal of the solid/liquid waste requirements may vary from municipality to municipality.

B. Garbage Area

Outside Storage: Place outside refuse containers and compactor systems on smooth non-absorbent surfaces such as concrete or machine-laid asphalt. Use a concrete pad for storing grease containers. These areas should be as far as possible from the building's doors and windows.

Pest control: When outside refuse containers and grease containers are within 20 feet of a food establishment's exterior delivery/service door, an air curtain, in addition to a self-closure device on doors, should be installed.

Enclosures: If you propose a garbage enclosure, construct it of durable, non-absorbent materials and a washable interior finish able to withstand frequent washing.

XIII. Heating, Ventilation, and Air Conditioning (HVAC)

A. Exhaust Plan Submittal

Submit complete HVAC plans, including restroom ventilation. Indicate the type of equipment being proposed for installation under the cook line exhaust hood.

B. Exhaust Hood Requirements

General: Commercial cooking or display equipment, which produces smoke, steam, grease, mists, particulate matter, condensation, vapors, fumes, odors, or create sanitation or indoor air quality problems, will require a hood. Hoods shall be designed and installed to prevent grease and condensation from collecting on walls, ceilings, and dripping into food or onto food contact surfaces. Canopy hoods must have at least a 6-inch overlap, over all cooking surfaces, on all open sides. Hoods less than 12 inches from the ceiling or adjacent walls shall be flashed solid with approved material. All hoods must comply with the 1997 Uniform Mechanical Code and all local building and fire safety codes.

A high temperature sanitizing dish wash machine will require an overlapping canopy or pant leg hood with forced ventilation to the outside air. The hood system must properly remove steam, heat, and moistures to the outside air.

All hood systems shall be inspected and tagged for approval by the local municipality prior to a final inspection by this Department. Final field approval must be obtained from this Department. A smoke test may be performed.

The installation of fire suppression system piping in the unfiltered air space in exhaust hoods should be limited to vertical runs as much as possible to minimize grease collection. Exposed piping must be cleanable. Fire suppression tanks must not be located over food storage or preparation areas.

Make-up Air: The amount of air to be exhausted must be in accordance with the 1997 Uniform Mechanical Code, where make-up air shall be balanced, tempered, and in the proximity of the exhaust system. The minimum make-up air to replenish exhausted air shall be:

Minimum CFM (Cubic feet of air per minute, volume of air) = 80% x Hood Exhaust CFM.

Make up air intakes must be screened and filtered to prevent the entrance of dust, dirt, insects, and other contaminating material.

Type I or Type II hood requirements: Every type I or Type II hood shall be constructed of stainless steel, galvanized steel, copper or other material approved by the building official for the use intended and of minimum thickness as specified in the Uniform Mechanical Code. The interior of vent hoods are not allowed to be painted. We recommend that you do not paint the exterior of the vent hood.

Type I Hoods are required over equipment that produce grease, smoke, excessive steam, heat, and condensation, particulate matter, odors, or create indoor sanitation or indoor quality problems.

Type II Hoods shall be installed over equipment that produce steam, heat, mists, condensation, fumes, vapors, and non grease laden foods.

Exceptions: A commercial exhaust hood is required for each cooking appliance, with the following exceptions:

1. Approved completely enclosed convection type ovens
2. Steam tables
3. Auxiliary cooking equipment that does not create a sanitation or indoor air quality problem, for example: Toasters, coffee makers, sandwich makers, electric rice cookers, electric cheese melters, soup wells, special event set ups, and temporary events.

Other Examples: Equipment that would require installation under a hood include: Kettles, pasta cookers, hot plates, salamanders, Mongolian style grills, gas cooking equipment, table side cooking equipment, such as Teppan Yaki style cooking, Tinadora ovens, rotisserie units, etc.

XIV. Outdoor Bars Areas, Outdoor Cooking, Outdoor Facilities, Catering, Temporary Food Service Establishments, and Seasonal Operations

A. General

All equipment, including but not limited to, windows, counters, shelves, vats, tables, refrigerators and sinks shall be kept clean and free from dust, dirt, insects, and all contaminating material. All food and drink shall be stored, displayed, and served so as to be protected from dust, insects, vermin, depredation and pollution by rodents, handling, droplet infection, overhead leakage, flooding, drainage, coughing, sneezing, inclement weather, and other contamination. Effective dust control measures shall be taken in the vicinity of all outdoor food operations. Adequate and convenient hand washing facilities and toilet facilities shall be provided.

B. Outdoor Bar Areas

Outdoor bar areas are permitted with the following stipulations:

No potentially hazardous foods (i.e. milk, creamers, etc.), food prep, service or storage is allowed.

Temporary ice bins shall be provided with closing lids. Ice machines/makers are not allowed outside.

No glassware or utensil washing is permitted. The installation of three compartment sinks or dishwashers is not allowed.

Glassware is prohibited in all pool areas.

Glassware and utensil storage is restricted. Limited use of protected utensils in bar areas is acceptable. Single service use utensils are preferred.

C. Outdoor Cooking

The permitted establishment must be adequately equipped and capable of cooking/grilling outside in a safe and sanitary manner. In order to cook/grill outside, the food service establishment must have equal or greater cooking/grilling and hot holding equipment inside the establishment.

The site selected and the method of cooking/grilling of food shall be approved by this Department. In addition, approval shall be obtained from the local regulating authority prior to a permit being issued by this Department.

Only the cooking and grilling of food will be allowed outside at permitted establishments. All food preparation must be completed within the permitted establishment.

All utensils and equipment used in the outdoor cooking/grilling of food must be returned to the permitted establishment for proper cleaning, except that in place cleaning may be allowed for steamers, grills, and other similar equipment. Sufficient quantities of utensils shall be provided to conduct the activity.

Cooking/grilling equipment shall be provided with covers. Covers or lids may be removed only for monitoring, stirring or adding additional ingredients. All outdoor cooking/grilling equipment, including custom-made equipment shall meet construction standards set forth by this Department. A final inspection and approval of the equipment is required.

When observation or inspection disclose that proper food protective procedures are not employed, such operation shall be discontinued. This includes operating when dusty conditions are prevalent or when other pertinent violations are noted.

D. Outdoor facilities

Any non-specific place or operation applicable to any establishment, place, or operation shall meet the same regulations noted elsewhere in this construction guide.

E. Catering Facilities

“Food Catering” refers to any establishment in which preparing food products or food is conducted at a permitted food establishment for service and consumption at another off-site location for a temporary event or other occurrence.

All catering activities must be conducted from an approved and permitted food establishment/commissary.

Equipment used for the transport, storage, and service of food products shall be constructed of approved materials and easily cleanable.

All food products requiring temperature control shall be transported and stored in equipment whose intended use is for such activities.

Any vehicle carrying food and food products shall be constructed, equipped and maintained as to protect the purity and wholesomeness of the transported products and shall conform to the applicable general regulations found in the Maricopa County Health Code and this construction guide. Personal vehicles (passenger cars, sport-utility-vehicles, open bed trucks, station wagons, etc.) are prohibited for use with a food catering operation. Vehicles used in transporting catering equipment and food shall be of a closed type, dust, and fly proof. Examples include large enclosed trucks, delivery vans, modified mini-vans, etc. All shelves used in such vehicles shall be readily removable and easily cleanable.

For further requirements and inquiries, please refer to, *A GUIDE TO FOOD CATERING IN MARICOPA COUNTY* handout and or contact the Food Catering Operations Specialist with this Department.

F. Temporary Food Service Establishments

Refer to, *A GUIDE TO TEMPORARY FOOD SERVICE AT SPECIAL EVENTS* handout and available download ([Special Events Handout](#)), or contact the Special Events Program Coordinator at 602-506-6978.

G. Seasonal Operations

Seasonal operations, such as swimming pool concession stands and spring baseball league, shall meet the same requirements set forth in this construction guide. For further general requirements and inquiries contact this Plan Review Office.

XV. Mobile Food Units, Mobile Commissaries, Vending Machines, Chemical Toilets, Mobile Pet Groomers, Water Transport Codes, Guides, Agreements, and Food Sales at Farmer's Markets and Swap Meets

Contact the Mobile Food Program Coordinator and or refer to the following available downloads at:

www.maricopa.gov/envsvc/Envhlth.asp

Mobile Food Health Code
Vending Machine Health Code
Chemical Toilet Health Code
Mobile Food Customer Survey
Mobile Food Units Class I

Pet Groomer Construction Guide
Mobile Commisary Agreement
Water Transport Health Code
Mobile Food Units-Class II
Mobile Food Units-Class III

XVI. School Grounds, Pet Shops and Groomers

These operations shall meet Maricopa County Health Code regulations, the same requirements noted elsewhere in this construction guide, and the following stipulations.

A. School Grounds

Fixture counts shall be based on the 1997-present Uniform Plumbing Code Table 4-1, p. 32.

Provide hot and cold water or tempered water under pressure to all sinks and utility sinks.

Provide a large floor-mounted; wall hung or leg-supported utility sink with hot and cold water for mop use. If a school has more than one level there must be at least (1) mop sink on each level.

Floor surfaces in the toilet areas and shower rooms shall be commercial grade, smooth, nonabsorbent, easily cleanable, and slope to a floor drain.

Play yards and fields shall provide adequate drainage to prevent flooding and standing water. Equipment and fixtures shall be maintained clean, safe and free from potentially hazardous surfaces.

Food service shall comply with Chapter VIII of the Maricopa County Health Code. An additional permit is required for food service.

B. Pet Shops and Groomers

Provide a smooth, nonabsorbent, easily cleanable surface light in color for the walls and ceilings of the, grooming, pet holding, and toilet areas (skip trowel finish is not acceptable). Walls around bathing areas shall be smooth, **waterproof**, and easily cleanable, to the level of splash. Use ceramic tiles, FRP, plastic board, or similar material.

Floor surfaces in the bathing, grooming, pet holding, and toilet areas shall be smooth, non-slip, nonabsorbent, and easily cleanable. In areas where birds are on perches, floors shall be of impervious construction. No carpeting shall be allowed within 18 inches of the outer end of the perch.

Keep all plumbing and conduit at least 6 inches above the floor level. All back flow prevention devices must be visible for inspection and not hidden in walls or other equipment. Provide a removable hair strainer in the grooming tub basin drain line.

Provide adequate lighting. Minimum lighting requirements are 20-foot candles (220 lux) in all bathing, grooming, and toilet areas. At least 10 foot-candles (110 lux) shall be provide in all other areas.

Provide adequate ventilation to the outside air for toilet rooms, bathing and grooming areas, and any areas where animals and birds are kept. Bird and reptile areas should be ventilated on an isolated circuit to the outside.

All animal cages and grooming tables must be of approved materials, which may be readily cleaned and disinfected.

Birds shall be housed at least 12 inches above the floor.

No portion of a pet shop or pet groomer, in which animals or birds are kept, caged, or boarded, shall be used for human habitation.

XVII. Bottled Water, Beverage Plants, Ice Manufacturing, and Water Outlet Stores

Every bottled water and water dispensing establishment, in which the process of placing water from an approved source into a sealed or unsealed container or package, shall be operated and maintained in a clean and sanitary condition in compliance with the appropriate provisions of Maricopa County Code Chapter VIII. This also includes beverage and ice establishments. Establishments selling more than water and ice will require additional permits to operate. In addition to all general requirements, water bottling facilities must meet the following requirements.

The bottling room shall be separate from other plant operations or storage areas by tight walls, ceilings, and self-closing doors to protect from contamination. Conveyor openings shall not exceed the size required to permit passage of containers.

The washing and sanitizing of containers for bottled drinking water shall be performed in an enclosed room. The washing and sanitizing operation shall be positioned within the room so as to minimize any possible post-sanitizing contamination of the containers before they enter the bottling room.

Filling, capping, and closing of containers shall be done with a "hands free" process, using approved equipment.

XVIII. Public/Residence Accommodations

These accommodations include any place such as a hotel, motel, motor hotel, tourist court, tourist camp, rooming house, boarding house, inn, and similar facility consisting of (2) or more dwelling units where sleeping accommodations are available. This includes any bed and breakfast, transient establishment, suite, cottage, bedroom or other unit established, maintained, held out or offered for occupancy. However, this does not include apartments and similar facilities if occupancy is on a permanent basis.

Establishments with pools, spas, or eating or drinking facilities, including continental breakfasts, will require additional permits. The public or residence accommodation shall comply with the appropriate provisions of the Maricopa County Environmental Health Code and the same requirements noted elsewhere in this construction guide and the following stipulations.

Rooms or dwelling units shall not be less than 100 square feet in floor area exclusive of bathrooms, closets, kitchens, and similar ancillary facilities. The walls and ceilings of all bedrooms and living rooms shall be of a finish that will permit easy cleaning.

Windows capable of being opened shall be effectively screened, with a minimum #16 mesh.

All units shall be adequately heated, cooled, lighted, and ventilated, including toilet rooms. Heaters and stoves, which use carbonaceous or gas fuels, shall be properly ventilated with continuous gas-tight vents discharging all gaseous products of combustion directly to the outside air.

An adequate and safe water supply shall be provided from an approved source. Ice shall be properly protected and dispensed.

If private or connecting toilet rooms are not available for each dwelling unit, separate and plainly marked central toilets for each sex shall be provided and located within 200 feet of such units. Central toilets shall provide no less than one toilet, one hand sink, and one tub or shower, for each sex, for every 10 dwelling units. At least one urinal shall be provided in each central toilet room designated for men.

Any dishwasher used by employees, for the washing of patron's glasses/dishware, must be commercial type and N. S. F. approved. **Home-style dishwashers are not allowed to wash any dishware.**

Clean linen shall be provided to each new guest and shall be changed at least once each week when occupancy exceeds this period.

XIX. Service Kitchens, Food Banks, Miscellaneous Food and Animals in Food Establishments

These establishments shall be operated and maintained in compliance with the appropriate provisions of the Maricopa County Environmental Health Code and meet the same regulations noted elsewhere in this construction guide. Detailed plans are required for service kitchens and food banks. Plan submittal is not required for miscellaneous food establishments.

A. Service Kitchens

Refers to a food service establishment that operates in conjunction with a central kitchen in a regulated establishment. A “central kitchen” means a permitted food service establishment.

Service kitchens are limited to the service of pre-prepared food. All food requiring extensive preparation, cooking, and cooling, etc., shall be produced in the central kitchen.

All potentially hazardous food must be maintained at proper temperature and protected from contamination during transportation, storage, and service. An approved thermometer shall be provided and used to assure the attainment and maintenance of proper holding temperatures of all potentially hazardous food.

Service kitchens shall be restricted to the onsite use of utensils only. Where utensils are limited in type to tongs, scoops, and similar articles, a NSF approved single compartment sink will be required.

B. Food Banks

Shall be assessed as a “Food Jobber”. The establishment may distribute food items that have been acquired through purchase or donation. All food items must be wholesome, unadulterated, unspoiled and not deteriorating.

C. Miscellaneous Food

This permit is designated for establishments that sell small amounts of pre-packaged non-potentially hazardous, non-perishable food (such as candy, potato chips, bottled water, etc.). Each establishment will be limited to a total of (10) linear feet of food sales/display space to qualify for this permit. If all food containers are non-breakable, carpeting may be allowed as approved by Maricopa County Environmental Health Code.

D. Animals In Food Establishments

Guide Animals: The Maricopa County Environmental Health Code Chapter VIII, Section 1, Regulation 9, states, "Live animals or birds are prohibited in any area of a food establishment where food is stored, processed, offered for sale or served"; except that guide animals may be allowed in the sales or serving area according the ADA Act of 1990.